



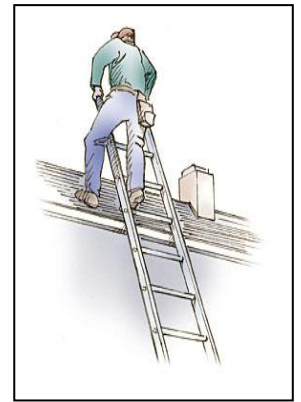
# Ladder Safety

## References

OSHA 1910.26

OSHA 1926.1053

SPP 1910.25



**Purpose:** The purpose of this safety material is to ensure the safe use of ladders and prevent injuries due to falls. According to OSHA, 24,882 injuries and 36 fatalities occur each year due to falls on ladders and stairways. Learning the basics of ladder safety will help to prevent or reduce to potential for injury to DOT employees.

## **Common Injuries that occur on ladders when:**

Ladders fail structurally (old or rotted);

Ladder tips sideways while climbing or working.

Ladder slips out from the bottom.

Ladder flips over backwards due to being too close to a building or step ladders not extended.

Ladder rungs or cleats are not clean or the ladder is slippery from grease or dirty boots.

Electrocution when using a metal ladder near energized power lines.

Ladders used in the construction industry and DOT assist workers in accessing areas not easily reached by standing on the ground. Used improperly, they can cause severe injury or even death. Ladders can be made of wood, fiberglass, aluminum, or steel (usually fixed). Their steps can be made of flat aluminum, off-set steps, round steel, or aluminum semi-round rungs. Which ladder to choose will depend on the type of work to be done and your weight? **NCDOT** does not allow a type III ladder to be used. Type II can only be used in office environments for painting or light duty operations.

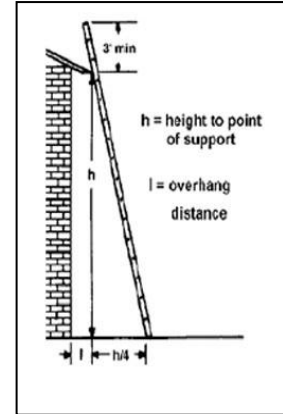
Type III	Type II	Type I	Type IA	Type IAA
Light Duty	Medium Duty	Heavy Duty	Extra Hvy. Duty	Special Duty
200 lbs.	225 lbs.	250 lbs.	300 lbs.	350 lbs.

Another factor that you must take into consideration is the amount of weight you will have when working with the ladder i.e. what you carry on your person. These can vary from a bundle of shingles to paint and nails. Tool belts also add weight depending on its contents.

Ladders must also be inspected to ensure that they are safe. Review the following information on the ladders and write down that an inspection has been done either on the daily report or a separate check list. **In General, check for the following items:** Steps in good condition, Rails not bent cracked split or splintering on the fiberglass, All labels in good condition and readable, Spreader bars are not bent, loose or broken, ladder feet are in good condition with all rubber pads in place, or cleated feet in place, ladder is not dry rotted, corroded or rusting.

## **Ladder Do's**

- Always inspect the ladder prior to use.
- When using the ladder, always face inward toward the steps.
- Always keep the feet on a solid level surface when possible.
- Always use the cleated feet to grab the ground and help stabilize it.
- Always stay centered on the ladder with your belt buckle inside the rungs.
- Always place the top of an extension ladder 3' above the landing or surface. It allows you something to hold onto as you transition from the ladder to the roof.
- When using an extension ladder, always keep a 4 to 1 ratio. Keep the foot of the ladder 1' out for every 4 feet it rises up.
- Always pass materials up to the person on top of the roof or ladder.
- Always use a 3 point stance when climbing or descending a ladder. 2 hands 1 foot, 2 feet 1 hand.
- Always clean your feet as much as possible to allow your feet to grip the rungs or steps.
- Always clean the cleats or rungs at the end of the day and as you work.
- Always mark or tag defective ladders for repair or destruction.
- Always make sure the spreaders are locked in place, or that the locks are fully engaged on a rung.
- Always hold a ladder for the climber until the extension ladder can be tied-off to prevent it from slipping.
- Always use two people to handle ladders when they are too heavy, bulky or long to the user.
- Always clear the area around the bottom of the ladder. Protect potential fall areas as much as possible where impalement can occur.



## **Ladder Don'ts**

- Place or keep a ladder in-service that is defective.
- Face outwards while working off a ladder.
- Stand on the top step or top of the ladder.
- Never place the ladder in front of a door or block exits
- Jump from a ladder. Dismount the ladder from the bottom rung.
- Adjust the ladder while standing or working from it.
- Never use metal ladders while performing electrical work or working near electrical lines.
- Never splice or tie ladders together.
- Never climb over the top rung on an extension ladder 3' above the landing.
- Never Climb or stand on the back rails.



NCDOT Division 1

## Ladder Inspection Form

Department: \_\_\_\_\_ District: 1 2 3

Ladder Type: Special ☐ Fiberglass ☐ Aluminum ☐ Wood ☐ Rope ☐

Inspected By: \_\_\_\_\_



**Item:**

**Steps:** Loose, Bent, Broken, Missing

**Rails:** Split, Dry-rotted, Cracked, Broken

**Labels:** Missing, Not Legible

**Spreader Bars:** Broken, Missing, Loose, Bent

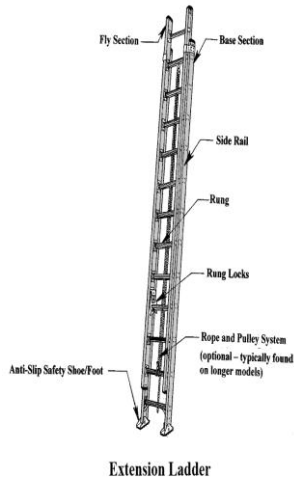
**Feet or Cleats:** Missing pads, Torn off,

**Top or Pail Shelf:** Missing, Broken, Cracked, Bent

☐ Ladder is in good condition and can be used.

☐ Ladder is in poor condition and tagged out for repair/replacement

Yes	NO



Items:	Yes	No
<b>Rungs:</b> Bent, Broken, Missing, Loose		
<b>Rails:</b> Cracked, Bent, Split		
<b>Labeling:</b> Missing, Not Legible, Torn, Painted Over		
<b>Rung Locks:</b> Missing, Bent, Broken, Loose		
<b>Hardware:</b> Missing, Broken or Loose parts		
<b>Shoes/Cleats:</b> Worn, Broken, Missing pads		
<b>Pulley &amp; Ropes:</b> Rotted, Missing, Loose, Bent		
<b>Other Conditions:</b> Rivets, Guides, Braces, Rust etc.		

☐
☐

Date: \_\_\_\_\_ Project: \_\_\_\_\_